Response under 37 C.F.R. 1.116
Applicant: Daniel R. Tretter et al.
Serial No.: 10/672,544
Filed: September 26, 2003
Docket No.: 200312433-1
Title: GENERATING AND DISPLAYING SPATIALLY OFFSET SUB-FRAMES

REMARKS

These remarks are made in response to the Final Office Action mailed June 22, 2005. In that Office Action, the Examiner rejected claims 1-20 under 35 U.S.C. §103(a) as being unpatentable over Seiichiro Tabata, U.S. Patent No. 6,384,816 ("Tabata").

With this Response, Applicant respectfully traverses the Examiner's rejection of claims 1-20, and requests reconsideration of the rejection of these claims. Claims 1-20 remain pending in the application and are presented for reconsideration and allowance.

35 U.S.C. §103 Rejections

The Examiner rejected claims 1-20 under 35 U.S.C. §103(a) as being unpatentable over Tabata, U.S. Patent No. 6,384,816 ("Tabata"). Independent claim 1 includes the limitation "displaying the sub-frames for each image frame in a second set of the plurality of image frames at a second plurality of spatially offset positions that is different than the first plurality of spatially offset positions." The Examiner has acknowledged with respect to this claim that "Tabata fails to specifically disclose displaying the sub-frames for each image frame in a second set of the plurality of image frames at a second plurality of spatially offset positions that is different than the first plurality of spatially offset positions." (Office Action at para. no. 2, page 3). Independent claim 8 includes the limitation "an image processing unit configured to define . . . third and fourth sub-frames corresponding to the second image" and "a display device adapted to . . . alternately display the third sub-frame in a third position spatially offset from the first position and the second position, and the fourth sub-frame in a fourth position spatially offset from the first position, the second position, and the third position." The Examiner has acknowledged with respect to this claim that "Tabata fails to specifically disclose third and fourth sub-frames corresponding to the second image." (Office Action at para. no. 2, page 6). However, with respect to independent claims 1 and 8, the Examiner stated that:

> Tabata teaches one frame is represented by dividing image signals into four images (col. 1, ll. 25-27); and **a delta array display having multiple frames (Fig. 4)** where each frame has pixel positions transitioned in either a vertical and/or horizontal distance from the first standard pixel position (col. 2, ll. 30-44).

> It would have been obvious to one of skill in the art to incorporate sub-frames of consecutive image frames displayed at different pluralities of spatially offset positions with the disclosure of Tabata because by vertically and/or horizontally positioning each sub-frame pixel based on the standard position of the first sub-frame pixel relative to the image frame **where each image frame occupies a different display position**, the position of each transitioned sub-frame pixel will be spatially offset from the sub-frame pixels of consecutive image frames. (Office Action at para. no. 2, page 3; and para. no. 2, pages 6-7) (emphasis added).

Applicant respectfully submits that the Examiner's statement that Figure 4 shows "a delta array display having multiple frames" is incorrect, and is not supported by any disclosure in Tabata. The Examiner's conclusions based on this false premise, such as the conclusion that "each image frame in Tabata occupies a different display position", are also incorrect, and are not supported by any disclosure in Tabata. There is no teaching or suggestion in Tabata regarding a delta array display having multiple frames, and there is no teaching or suggestion in Tabata regarding each frame occupying a different display position.

Figure 4 of Tabata shows a single frame with four fields. Each square in Figure 4 represents a pixel or pixel position. The white pixels correspond to a first field of the frame, the pixels with coarse stipple shading correspond to a second field of the frame, the black pixels correspond to a third field of the frame, and the pixels with fine stipple shading correspond to a fourth field of the frame. (See, e.g., Tabata at col. 1, lines 24-35 and 46-57; col. 4, lines 48-57; col. 8, lines 3-23).

The Examiner appears to contend that each group of four pixels in Figure 4 corresponds to a different frame. This contention would require that each field of the frame includes a single pixel. There is no disclosure in Tabata regarding single-pixel fields. Rather, Tabata indicates that each field includes multiple pixels. (See, e.g., Tabata at col. 8, lines 3-23, disclosing that the video signals corresponding to the pixel "positions" [plural] for each field "are" read out). Thus, the Examiner's argument is inconsistent with the disclosure of Tabata.

In the Response to Arguments section of the Final Office Action, the Examiner made similar comments to those addressed above. Specifically, the Examiner stated that "Tabata teaches a delta array displays image frames, which each consists of four divided image signals, e.g. sub-frames (col. 1, ll. 24-30; Fig. 2). Thus, **Fig. 2 is representative of a display**

of multiple image frames each consisting of 4 subframes." (Office Action at para. no. 3, page 12) (emphasis added). First, Figure 2 illustrates a rectangular array rather than the delta array referred to by the Examiner. Second, like Figure 4, Figure 2 also shows a single frame with four fields. (See, e.g., Tabata at col. 1, lines 24-35 and 46-57; col. 4, lines 48-57; col. 8, lines 3-23). Applicant respectfully submits that the Examiner's statement that "Fig. 2 is representative of a display of multiple image frames" is incorrect, and is not supported by any disclosure in Tabata. Applicant respectfully requests that the Examiner reconsider the validity of the statements made regarding Tabata and reconsider the finality of the current Office Action in order to facilitate timely prosecution of the present application.

One of the requirements of establishing a *prima facie* case of obviousness is that "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2143. The Examiner has acknowledged that Tabata does not teach or suggest all of the limitations of claim 1 or claim 8. (Office Action at para. no. 2, page 3 and page 6). The Examiner has cited nothing in Tabata that teaches or suggests the above-quoted limitations of independent claims 1 and 8. There is also no teaching or suggestion in Tabata regarding the advantages provided by embodiments of the present invention, such as avoiding a loss in bit-depth typically associated with fixed two-position processing or fixed four-position processing. (See, e.g., specification at page 16, lines 11-15; and page 17, line 27 to page 18, line 7).

Since Tabata does not teach or suggest each and every limitation of claim 1 or claim 8, it is not clear if the Examiner is relying on Official Notice, or the concept of inherency, in the rejection of these claims. However, as indicated in the Manual of Patent Examining Procedure, "[o]fficial notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well known." MPEP § 2144.03(A). "It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well known." *Id.* (emphasis in original). The limitations in claims 1 and 8 that the Examiner appears to have acknowledged are not explicitly taught or suggested by Tabata are not well known facts that are capable of

instant and unquestionable demonstration as being well known, and it would be inappropriate to simply rely on official notice in this case.

The above-quoted limitations of claims 1 and 8 are also not inherent in Tabata. As the Federal Circuit has stated, "[i]nherent anticipation requires that the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art." *Trintec Indus., v. Top-U.S.A. Corp.*, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002) (quoting *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)). The above-quoted limitations of claims 1 and 8 are not "necessarily present" in the system disclosed in Tabata.

In view of the above, independent claims 1 and 8 are not taught or suggested by Tabata. In addition, dependent claims 2-7 and 9-11 which further limit patentably distinct claim 1 or claim 8, and are further distinguishable over the cited reference, are also believed to be allowable over the cited reference. Reconsideration and allowance of claims 1-11 is respectfully requested.

Independent claim 12 includes the limitations "means for receiving a set of consecutive high resolution images" and "means for automatically varying the set of spatially offset positions for at least one of the high resolution images". Independent claim 19 includes the limitations "receiving a set of consecutive high resolution images" and "automatically varying the plurality of spatially offset positions for at least one of the high resolution images". The Examiner indicated that these limitations are taught or suggested by Tabata at col. 2, ll. 25-33, and Figs. 9 and 10. These portions of Tabata cited by the Examiner indicate that the same set of four positions are used for consecutive frames, and do not teach or suggest automatically varying spatially offset positions for at least one high resolution image in a set of consecutive high resolution images. For the reasons set forth above with respect to independent claims 1 and 8, Tabata also does not teach or suggest the limitations of independent claims 12 and 19 quoted above.

In view of the above, independent claims 12 and 19 are not taught or suggested by Tabata. In addition, dependent claims 13-18 and 20 which further limit patentably distinct claim 12 or claim 19, and are further distinguishable over the cited reference, are also believed to be allowable over the cited reference. Allowance of claims 12-20 is respectfully requested.

CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-20 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-20 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to either Susan E. Heminger at Telephone No. (650) 236-2738, Facsimile No. (650) 852-8063 or Jeff A. Holmen at Telephone No. (612) 573-0178, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,

Daniel R. Tretter et al.,

By their attorneys,

DICKE, BILLIG & CZAJA, PLLC
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402
Telephone: (612) 573-0178
Facsimile: (612) 573-2005

Date: 8/22/05
JAH:jmc

Jeff A. Hamen
Reg. No. 38,492

CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted via telefacsimile to **Examiner Harrison, Group Art Unit 2677, at Fax No. (571) 273-8300** on this 22nd day of August, 2005.

By Julianne Christiansen
Name: **Julianne Christiansen**